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6.13 VISUAL RESOURCES

This assessment of visual resources documents existing visual conditions and evaluates the potential change to these conditions from developing the Project. The visual resource analysis evaluates the existing visual character of the area and the type of change that could occur as a result of the Project. The visual change imposed by the Project is influenced by the existing character of the setting, the location of viewpoints open to the public, and the proximity and number of sensitive viewer locations, such as nearby residences. The proposed location for the Project does not contain any identified scenic corridors or nearby residences.

The analytic approach incorporates generally accepted criteria for evaluating visual resources in non-developed rural areas, and relates these criteria to views of selected viewpoints with and without the Project, using computer simulations to illustrate views with the Project. This section also includes an assessment of the Project's cumulative visual impacts, a description of the laws, ordinances, regulations, and standards relevant to the Project area's visual resources, and a proposed landscaping plan. The visual resource analysis utilizes a nine-step process illustrated by Figure 6.13-1 below.

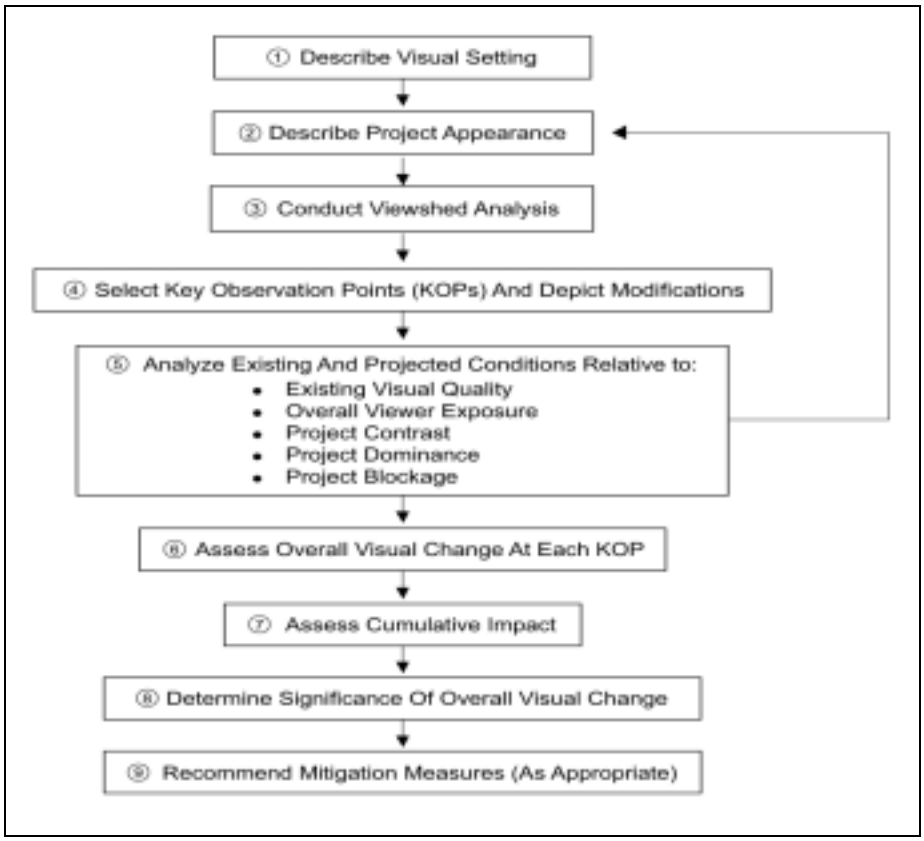


Figure 6.13-1: Visual Resource Analysis Process

6.13.1 SUMMARY OF FINDINGS

The San Joaquin Valley is a sparsely populated area (less than one person per acre) dominated by land under agricultural production that is defined by a rectilinear grid of section parcels. Man-made features such as transmission towers, power lines, ranch structures, and water irrigation apparatus dot the landscape. The Project vicinity does not contain any identified scenic roadways or scenic vistas. Most public views of the Project would be from the roadways in the Project vicinity. Five representative public view locations were identified with the concurrence of the CEC and City of Avenal staff. These key observation points (KOPs) were located at Interstate 5, along Avenal Cutoff Road at varying distances from the Project, and from the few residences along Orange Avenue approximately 1.3 miles from the Project. The Project will be developed on approximately 25 acres of a 148-acre Site and sited on the southeast corner of the Site at the maximum distance from Avenal Cutoff Road.

The visual resource analysis considered the quality of the existing environment, as well as the potential visual effect from implementing the Project. The evaluation of the visual setting considered the visual quality and overall viewer exposure at each of the KOPs. The existing visual quality was characterized as moderate to low because of the preponderance of man-made features in the landscape. The overall viewer exposure was characterized as predominately low because of the brief duration of the views (motorists travel at high speeds along Interstate 5 and Avenal Cutoff Road) and distance of viewers from the Project. Residents along Orange Avenue would experience more extended views than vehicles traveling along Avenal Cutoff Road, and the overall visual exposure was characterized as moderate at this viewpoint.

The evaluation of the Project effects considered the potential contrast, dominance, and blockage that would be introduced by the facility at each KOP. Contrast was characterized as high at the closest viewpoint and low at the most distant viewpoint. The facility would dominate the view from the entrance road (the closest viewpoint), would be subordinate to other features of the landscape from three more distant viewpoints, and would be co-dominant with the water treatment plant and San Luis Canal from one viewpoint. View blockage was characterized as low at four viewpoints and moderate at one viewpoint.

The evaluation of the overall visual change resulting from the Project was based on ratings of visual quality, overall viewer exposure, contrast, dominance, and blockage. Features incorporated into the Project to reduce visual impacts e.g., siting the Project at the southeast corner of the 148-acre Site and including a conceptual landscape plan incorporating agricultural patterns of the area, were considered when evaluating the potential visual change. Because visual quality, viewer exposure, contrast and blockage were all rated moderate to low, and the Project exhibited a subordinate relationship to other features of the landscape, the overall visual change was characterized as neutral at four of the five KOPs. At the viewpoint from the entrance road, closest to the Project, the overall visual change with landscaping was characterized as positive.

6.13.2 VISUAL SETTING

The Site is located in the agricultural region of southwestern San Joaquin Valley, approximately 2 miles east of Interstate 5, in the Avenal city limits (Figure 6.13-2). Avenal Cutoff Road provides access to the Site from Interstate 5 and from communities such as Lemoore and Hanford, northeast of the Site. The Site is relatively flat with elevations ranging from approximately 360 feet to approximately 320 feet above sea level. Bordering the Site are the City of Avenal's water treatment facility, the San Luis Canal, and land under agricultural production. The City of Avenal's residential and business district is approximately 6 miles southwest of the Project, visually separated from the Site by the Kettleman Hills. There are no designated scenic highways, roads, or corridors in the Project vicinity.

Figure 6.13-2: Project Location

The Project area's landscape character is defined by features occurring naturally in the landscape and features that have been introduced by man into the landscape. For this analysis, the naturally occurring landscape features are called landscape units, while those introduced by man are called man-made features. The San Joaquin Valley and Kettleman Hills comprise the two landscape units in the Project area, and have undergone extensive development activity to enable production of agricultural and industrial products. Man-made features located throughout the landscape include paved roadways, transmission line structures, the San Luis Canal, the City of Avenal water treatment facility, ranch structures, water pumping station standpipes, communication towers, and land under agricultural production. Figure 6.13-5 illustrates the location of the landscape units and man-made features in the Project vicinity.

6.13.2.1 Landscape Units

San Joaquin Valley

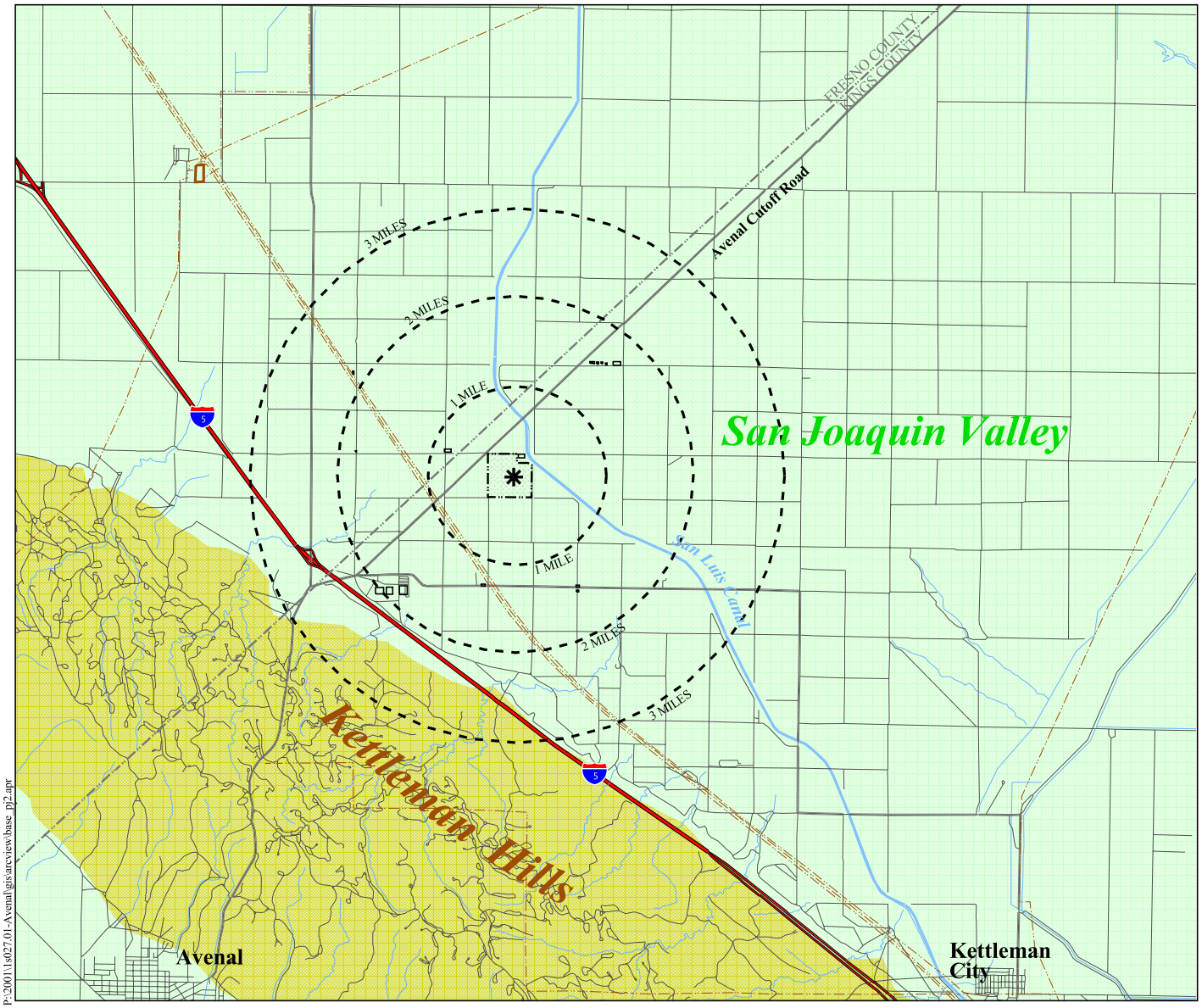
The San Joaquin Valley is dominated by land under agricultural production defined by a rectilinear grid of section parcels. The landscape is dotted with man-made features such as transmission tower lines, ranch structures, and water irrigation apparatus (Figure 6.13-3).

Figure 6.13-3: View of Project Vicinity

Kettleman Hills

The Kettleman Hills are approximately 2 miles west of the Site and rise between 110 and 1,200 feet above the City of Avenal and the San Joaquin Valley. They are sparsely vegetated, have oil wells and oil pipelines, and contain a few scattered ranch houses (Figure 6.13-4).

Figure 6.13-4: Kettleman Hills from Avenal Cutoff Road



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Landscape Units and Man-Made Features

Landscape Units

- Kettleman Hills
- San Joaquin Valley

Man-Made Features

- County Boundary
- Interstate Highway
- Transmission Line
- San Luis Canal
- Roads
- Nearby Existing Structures
- New Project Location
- Project Site Boundary

N

Scale 1 : 72,000
1" = 6000 feet

1 0 1 2 Miles

6000 0 6000 12000 Feet

GIS Mapping by **EDAW, Inc.** - San Francisco EDAW

Figure 6.13-5

6.13.2.2 Man-Made Features

Interstate 5 Freeway

Interstate 5 runs parallel to the Kettleman Hills approximately 2 miles from the Site (Figure 6.13-6). It is slightly elevated above the valley floor at the edge of the Kettleman Hills. Interstate 5 is a four-lane freeway that carries approximately 27,750 vehicles per day (capacity of 80,000 vehicles per day). This roadway is not a designated scenic highway.

Figure 6.13-6: Interstate 5 Freeway at Avenal Cutoff Road Overpass

Transmission Line Structures

Numerous PG&E high-voltage transmission lines, ranging in height from 120 to 150 feet, pass within 3,000 feet of the Site. They run north to south, encompassing agricultural lands within their rights-of-way. The structures are characterized by multiple, galvanized steel members, laced together to form steel towers (Figure 6.13-7).

Figure 6.13-7: Existing Transmission Line Structures

San Luis Canal

The San Luis Canal winds through the Project area. The canal is protected by levees on each side, with maintenance roads located on top of the levees. It is at an elevation of approximately 318 feet above sea level, which is above the elevation of the surrounding land, and approximately 150 feet wide (Figure 6.13-8).

Figure 6.13-8: San Luis Canal Near Site

Avenal Cutoff Road

Avenal Cutoff Road provides access to the communities north of the Site from Interstate 5 and from the communities of Hanford and Lemoore. It is a two-lane paved and striped arterial roadway carrying approximately 2,455 vehicles per day (Figure 6.13-9). There are no lights or stop signs along the road in the Project area. This roadway is not a designated scenic highway.

Figure 6.13-9: Avenal Cutoff Road Looking Northeast

Water Treatment Facility

The City of Avenal's water treatment facility, located adjacent to the San Luis Canal, is comprised of low rise brown corrugated steel buildings with a few cylindrical storage tanks of various sizes along the perimeter (Figure 6.13-10). The treatment facility is enclosed by cyclone fencing with lighting placed above the fence line. Vertical light fixtures are also placed throughout the interior of the facility.

Figure 6.13-10: Water Treatment Facility

Agricultural Production

The primary use of land in the Project area is for agricultural production (Figure 6.13-11). Parcels planted with irrigated almond and orange orchards, and row crops such as tomatoes, cotton, and barley dominate the area. The orchards are in varying degrees of maturity. Those in the immediate Project area are young (planted in 2001).

Figure 6.13-11: Land Under Agricultural Production

Ranch Structures/Farm Equipment Areas

Ranch structures are interspersed throughout the Project area (Figure 6.13-12). These structures are generally one to two stories high and constructed of wood and metal. They are typically bordered by concentrated plantings of larger trees typically visible from afar and shrubs that separate the structures from the outlying agricultural land.

Figure 6.13-12: Farm Equipment Storage North of Avenal Cutoff Road

Water Pumping Station Standpipes

Water pumping station standpipes are used throughout the agricultural land. They are vertical towers, approximately 60 to 100 feet high, that are usually painted white (Figure 6.13-13).

Figure 6.13-13: Water Pumping Station Standpipe Near Avenal Cutoff Road

6.13.3 PROJECT APPEARANCE

6.13.3.1 Power Plant

The Applicant will construct and operate a combined-cycle electric power generating plant and ancillary facilities on approximately 25 acres of a 148-acre parcel. The proposed Site layout is illustrated on Figure 6.13-14 below. The dimensions of the major Project features are summarized in Table 6.13-1. Project elevations are illustrated on Figure 6.13-15 and an isometric view of the Project is provided on Figure 6.13-16.

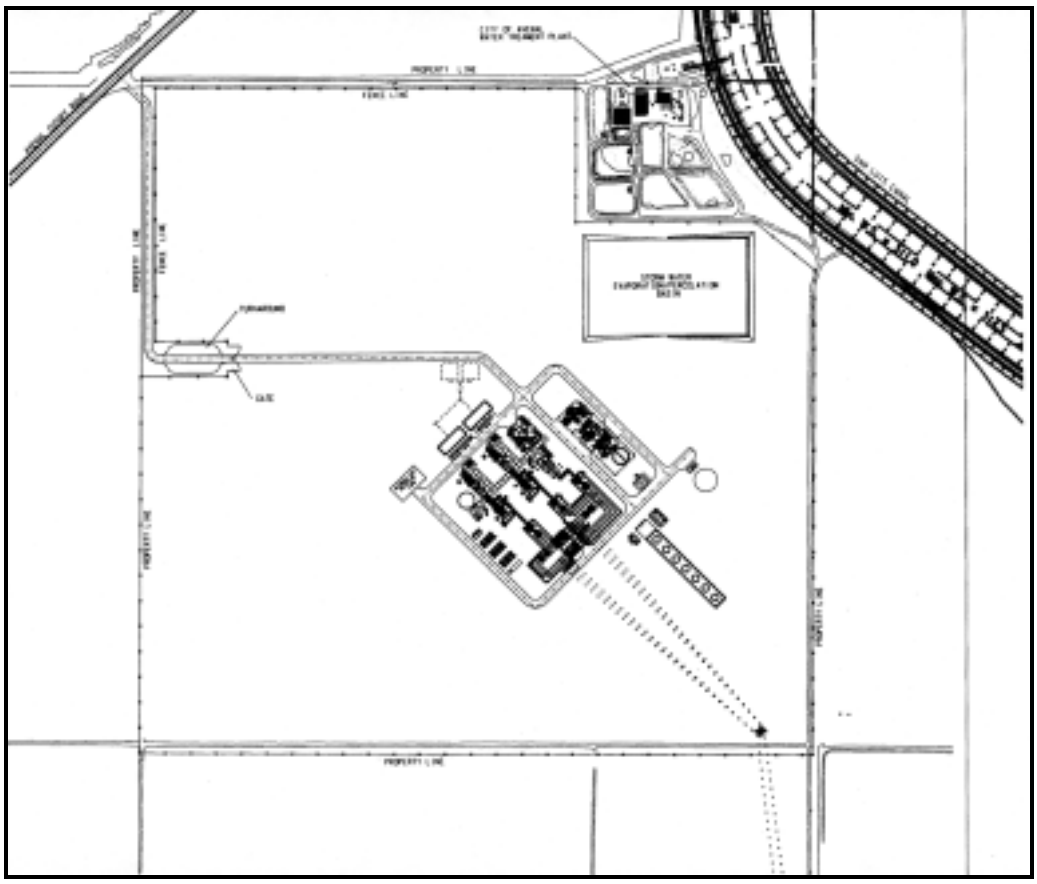

Figure 6.13-14: Site Layout

6.13.3.2 Water and Natural Gas Pipelines

These lines would be buried and the surface conditions restored. Any visual effects associated with the pipelines would be restricted to the construction phase. During construction, the area along the rights-of-way would be temporarily disrupted by machinery, excavated piles of dirt, construction vehicles, and other disturbances associated with pipeline construction. These effects, however, would be minor and temporary.

Table 6.13-1: Dimensions of Major Project Features

Feature	Height (feet)	Length (feet)	Width (feet)	Diameter (feet)
HRSG(s)	95	110	32	
HRSG Stacks	145			19
Combustion Turbine Generator (CTG)	26	100	23	
Brine Concentrator	80			
CTG Air Inlet	68	45	13	
4.1 kV Substation	20	110	84	
Transformer	25	29	16	
Steam Turbine Generator (STG)	52	94	35	
Cooling Tower	45	400	50	
Raw Water/Fire Water Storage Tank	40			90
Inlet Air Chillers/Auxiliary Cooling Tower(s)	53	63	31	
Administration Building	13	116	42	
Warehouse/Maintenance Building	24	123	42	

Source: Duke/Fluor Daniel, August 2001

6.13.3.3 Design Considerations for Reduced Visual Impact

- The Site is located approximately 2 miles from Interstate 5 at an elevation approximately 200 feet lower than the freeway, which reduces visibility from Interstate 5.
- The Project has been sited on the southeast corner of the Site at the maximum distance from Avenal Cutoff Road to reduce visibility from the road.
- The transmission lines extend from the back of the power plant to the southeast corner of the Site to reduce visibility from Avenal Cutoff Road.
- The Project has been oriented parallel to Avenal Cutoff Road to minimize the mass of the structure when viewed from the road.
- A conceptual landscaping plan that incorporates agricultural patterns of the area is included as part of the Project (see 6.13.3.4). The landscaping plan will be coordinated with the City of Avenal and provided to the City for review.
- Landscaping will be planted close to Avenal Cutoff Road outside of the construction laydown area during construction to reduce views into the Site.
- Landscaping will be actively maintained in accordance with general farming practices for weed and dust management.

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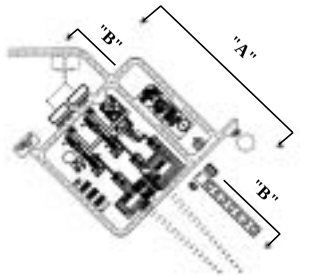
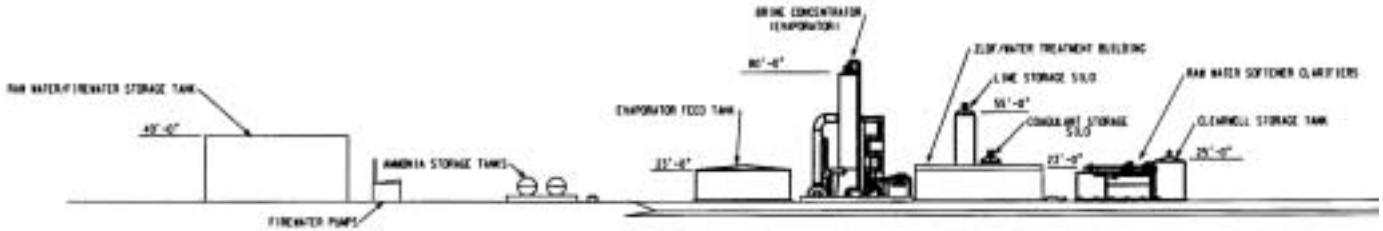
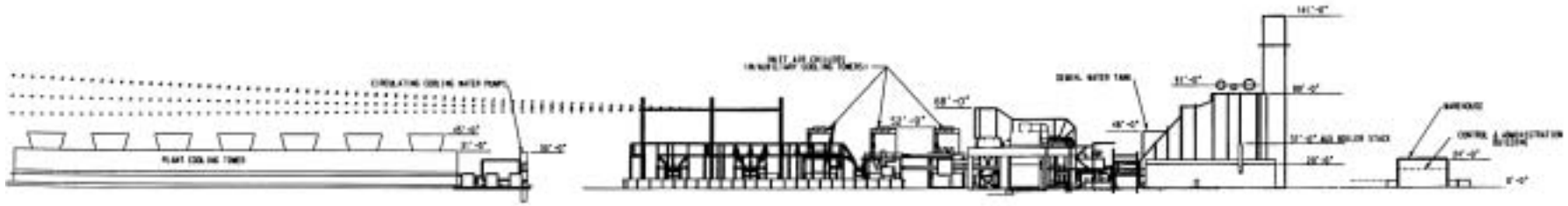
Elevation Views
Conceptual Design

KEY PLAN





ELEVATION "A"



ELEVATION "B"

Source: Duke/ Flour Daniel, 2001

EDAW, Inc. - San Francisco

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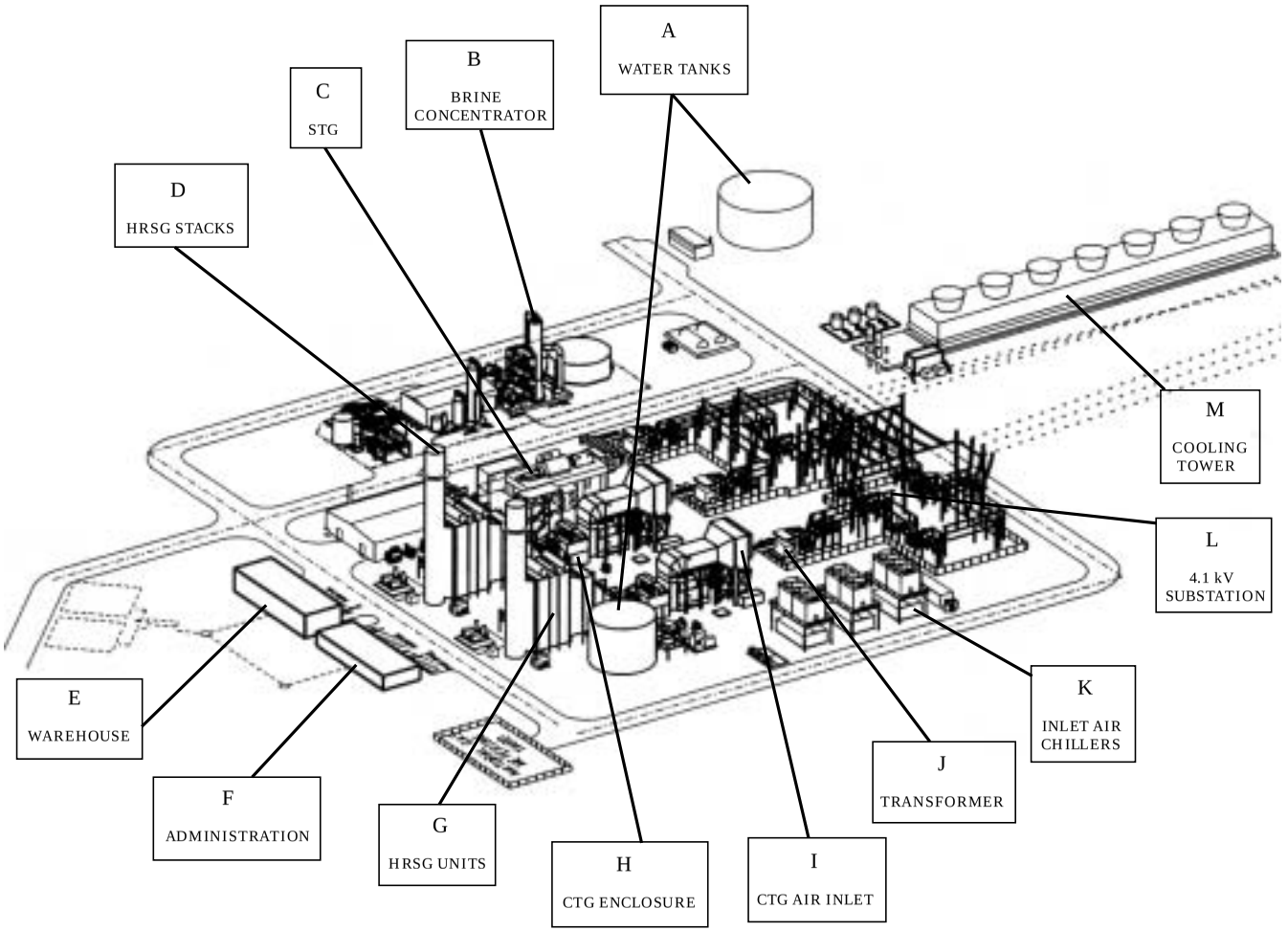

Source: Duke/ Flour Daniel, 2001

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Isometric View Conceptual Design

LEGEND

A - WATER STORAGE TANKS

B - BRINE CONCENTRATOR

C - STEAM TURBINE GENERATOR (STG)

D - HEAT RECOVERY STEAM GENERATOR (HRSG) STACKS

E - WAREHOUSE

F - ADMINISTRATION

G - HRSG UNITS

H - COMBUSTION TURBINE GENERATOR (CTG) ENCLOSURE

I - CTG AIR INLET

J - TRANSFORMER

K - INLET AIR CHILLERS

L - 4.1 kV SUBSTATION

M - COOLING TOWER

EDAW, Inc. - San Francisco

6.13.3.4 Conceptual Landscape Plan

The conceptual landscaping plan blends the industrial character of the Project into its agricultural setting by extending agricultural patterns into the Site and by allowing views of the equipment. Features of the surrounding landscape, such as an orange orchard and windrows of tall evergreen trees, are arranged to create vegetative backdrops, screens, and framed views of the Project. Views into the Project are provided in response to specific requests from the City of Avenal to use the Project to highlight the industrial development planned for the area. View corridors were established from Avenal Cutoff Road and Plymouth Avenue, as shown in Figure 6.13-17. Views from Interstate 5 were generally not considered because of their distance from the Project.

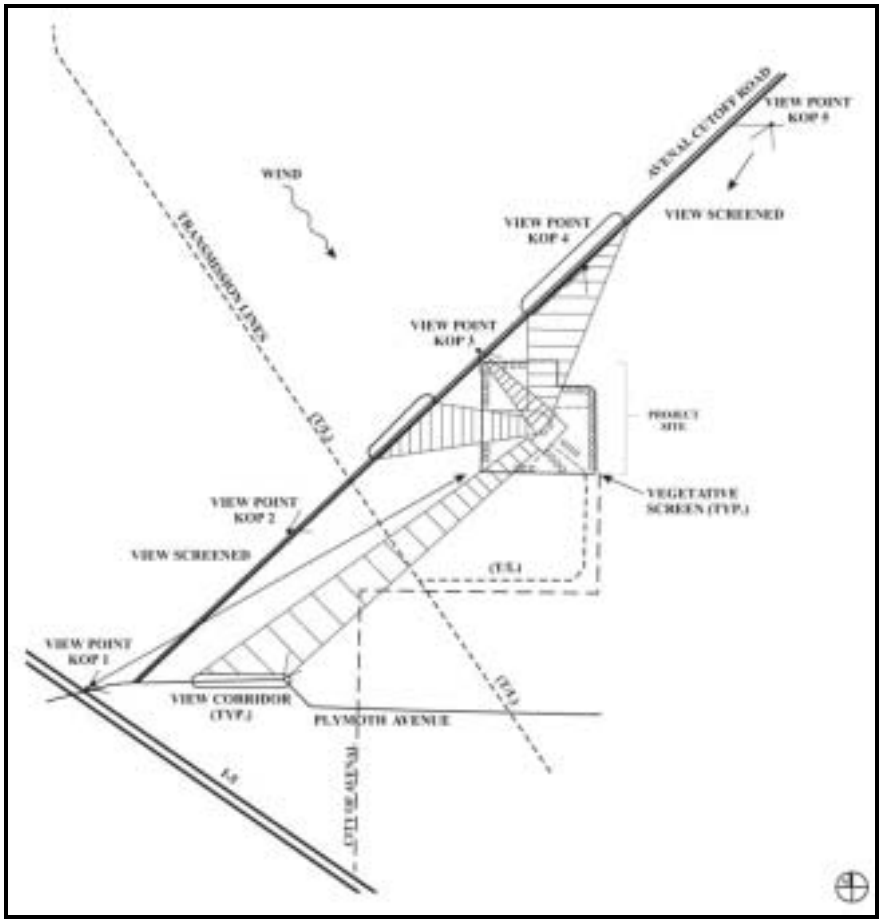

Figure 6.13-17 Avenal View Corridors

The proposed landscape view corridors create a dynamic interplay between constantly changing views of the Project and the traveling viewer. In a car traveling along Avenal Cutoff Road, the facility is revealed to the motorist by short glimpses, in views framed by vegetation. From some viewpoints the facility is screened from view by windrows of tall evergreen trees, in patterns

similar to the vegetation that exists around ranch houses and agricultural processing facilities in the area. Landscape screens are used to limit views where viewers may see the facility for a longer duration, such as the residents along Orange Avenue. Figure 6.13-18 illustrates the proposed conceptual landscaping plan.

For a motorist coming from Interstate 5, the landscape plan provides a variety of visual experiences. The first discernable view of the Project is encountered where the Avenal Cutoff bridge passes over Interstate 5. The road is oriented directly towards the facility and the elevated location offers a view to the facility past the transmission lines in the distance. Traveling easterly on Avenal Cutoff Road, views are screened until after the motorist passes under the transmission lines. At that point, the screen of tall evergreen trees opens to frame a view of the power plant in a setting of trees in a grassy plane. The power plant remains visible for one third of a mile, then the screen becomes visible again. The nearest view available to the public at the entrance road to the Site is revealed for approximately 2 seconds and then the Project is no longer visible.

Another view corridor is established for motorists traveling in a westerly direction on Avenal Cutoff Road. It opens approximately one-quarter mile before crossing the San Luis Canal and continues for approximately one-quarter mile after that, with a total viewing time of about 30 seconds. The most direct view from this location is revealed as the road rises over the canal. The windrows across the ground-plane establish a broad setting for the Project in the landscape from this view, while the water treatment plant is screened from view.

Interim views during Project construction will be enhanced by plantings of row crops (e.g., barley, wheat, onions, peppers, lettuce, melons, tomatoes) adjacent to Avenal Cutoff Road in areas not impacted by construction. Additionally, windrows of tall evergreen trees will be planted at the entrance to the Project and along the perimeter of the Site in areas not impacted by construction. The landscaping will be actively maintained for weed and dust control.

6.13.3.5 Night Lighting

Night lighting for the Project would illuminate the facility sufficiently to ensure safe working conditions. Caps would be provided on luminaires to minimize upward glare. The proposed landscaping surrounding the power plant and Site also would provide off-site screening of the night lighting.

6.13.3.6 Visible Water Vapor Plume

Under most circumstances, no visible water plumes will be seen emanating from the plant's HRSG stacks. However, there may be a few occasions during the year when temperatures are low and humidity is high that condensed steam may be visible coming out of the stacks. These conditions are expected to occur primarily at night and in the early morning hours.

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Conceptual Landscape Plan

on Air Photo

- VIEW CORRIDORS INTO PROJECT
- ORANGE ORCHARD
- TALL DENSE EVERGREEN SCREEN
- NON-IRRIGATED GRASSES
- ROW CROPS
- KEY OBSERVATION POINT (KOP) ACTUAL LOCATION
- KEY OBSERVATION POINT - LOCATED OUTSIDE PHOTO BASE

N

Scale 1 : 4,800
1" = 400 feet

400 0 400 800 Feet

100 0 100 200 Meters

EDAW, Inc. - San Francisco

EDAW

Figure 6.13 -18

6.13.3.7 Transmission Line Route

The proposed transmission line route would extend approximately 7,000 linear feet south and west from the switchyard located at the Site to the PG&E transmission grid. A typical existing and proposed view of the transmission connector is provided in Figure 6.13-19 below.

View without Transmission Line Connections

View with Transmission Line Connections

Figure 6.13-19: Typical View of Proposed Transmission Connectors

6.13.4 VIEWSHED ANALYSIS

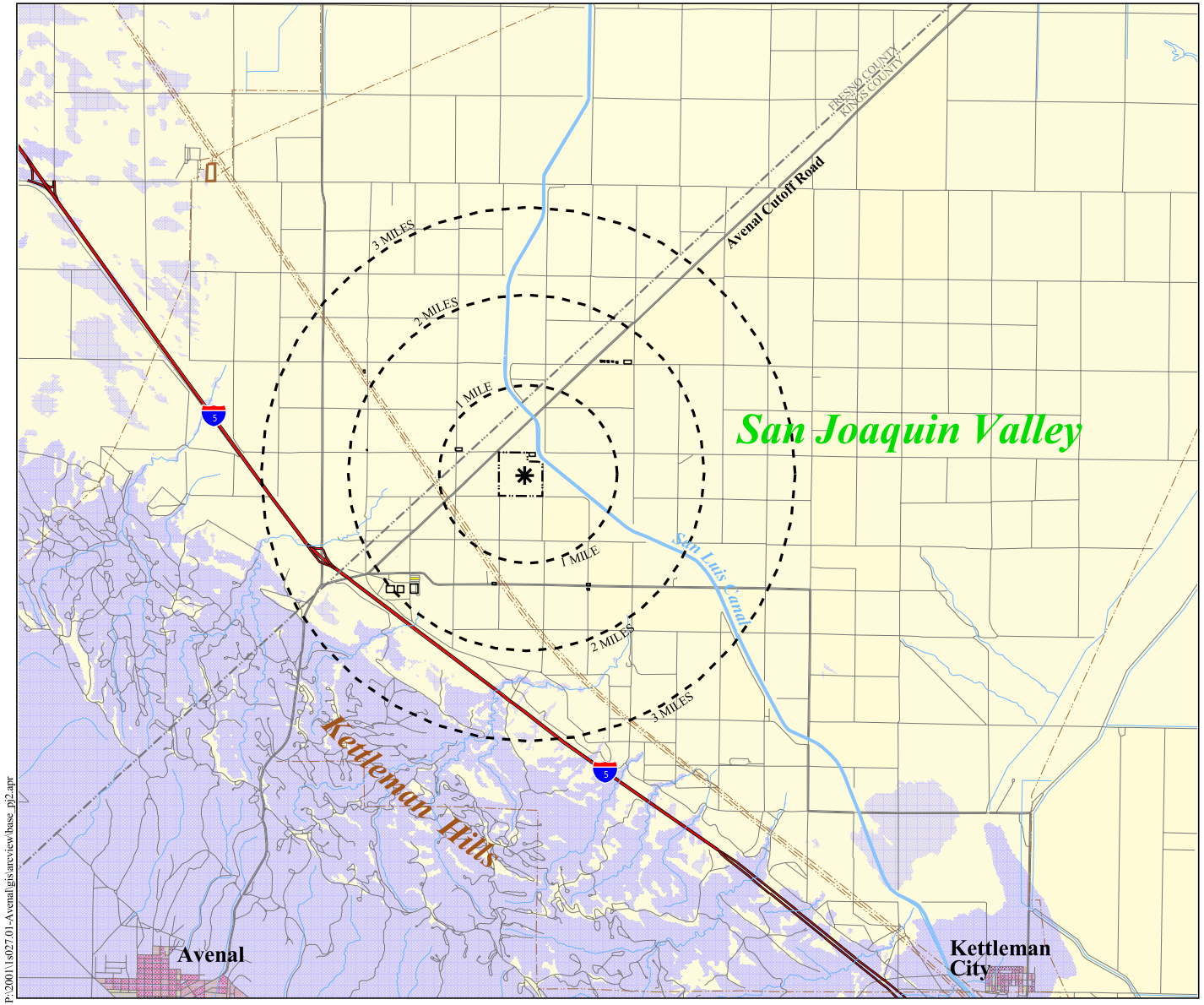
Figure 6.13-20 provides a generalized indication of the areas from which the Project is likely to be visible (Project viewshed). The viewshed figure is developed from a terrain model base, and therefore does not represent trees, structures, and other features in viewers' immediate foreground that might block views towards the Project. Orchards, residential landscapes, and farm vehicle storage facilities in the Project vicinity could block views towards the Project.

Because of the generally flat terrain in the Project vicinity, the viewshed analysis indicates potential Project visibility beyond 5 miles; however, the model doesn't consider haze and other atmospheric conditions. In actuality, views from more than 3 miles away would become part of the background, the landscape zone in which little color or texture is apparent, colors blur into values of blue or gray, and individual visual impacts become least apparent (USDA Forest Service, 1973). The boundaries of the area of potential visibility were therefore set at 3 miles from the Project.

There are very few structures located within 3 miles of the Project. The population density in the valley is less than one person per acre, with most of the land used for agricultural production. A few residences are located along Orange Avenue and along Plymouth Avenue over 1 mile away from the Project. A farm office is located less than 1 mile north of the Project and visually separated from Avenal Cutoff Road by farm outbuildings and equipment (Figure 6.13-12). The remaining land area within 3 miles of the Project is comprised of industrial facilities (PG&E compressor station, San Luis Canal, transmission towers), roadways, farm-related structures, and various orchards and row crops.

The largest number of public viewers of the Project would be motorists traveling on the roadways in the Project vicinity (Interstate 5, Avenal Cutoff Road, Plymouth Avenue, and Orange Avenue). Motorists travel at high speeds along Interstate 5 and Avenal Cutoff Road. A rest area along Interstate 5 located slightly more than 3 miles from the Project could provide an opportunity for more extended views towards the Project; however, views from the rest area are obscured by orchards, shrubs, and on-site structures.

Views towards the Project from motorists traveling along Interstate 5 would be periodically blocked by berms and related landscaping bordering the freeway. Motorists traveling northeast along Avenal Cutoff Road would view the Project through the existing transmission towers and related agricultural infrastructure. Motorists traveling southwest along Avenal Cutoff Road near the San Luis Canal would view the Project across the canal structure, with the water treatment plant to the left of the Project. Views of the Project from the few residences along Orange Avenue and the one residence along Plymouth Avenue would be somewhat obscured by existing trees and shrubs bordering these residences.



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Project Visibility on Population Density

Population Density

Project Visibility

Visible	Not Visible	
		Less than 1 person / acre
		1 to 3 persons / acre
		4 to 5 persons / acre
		6 to 7 persons / acre
		8 to 16 persons / acre
		17 to 27 persons / acre
		28 to 39 persons / acre
		40 or more persons / acre

Man-Made Features

- County Boundary
- Interstate Highway
- Transmission Line
- San Luis Canal
- Roads
- Nearby Existing Structures
- New Project Location
- Project Site Boundary

N

Scale 1 : 72,000

1 0 1 2 Miles

6000 0 6000 12000 Feet

1" = 6000 feet

GIS Mapping by **EDAW, Inc.** - San Francisco

EDAW

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Figure 6.13-20

6.13.5 VISUAL IMPACT ASSESSMENT METHODOLOGY

The visual impact assessment evaluates the changes to the visual setting resulting from construction and operation of the Project. The evaluation of the overall visual change that could result from the Project (positive, neutral, or negative) considers the existing visual character as well as the Project effects upon the visual landscape as illustrated by Figure 6.13-21 below. A more comprehensive explanation of the methodology is also provided.

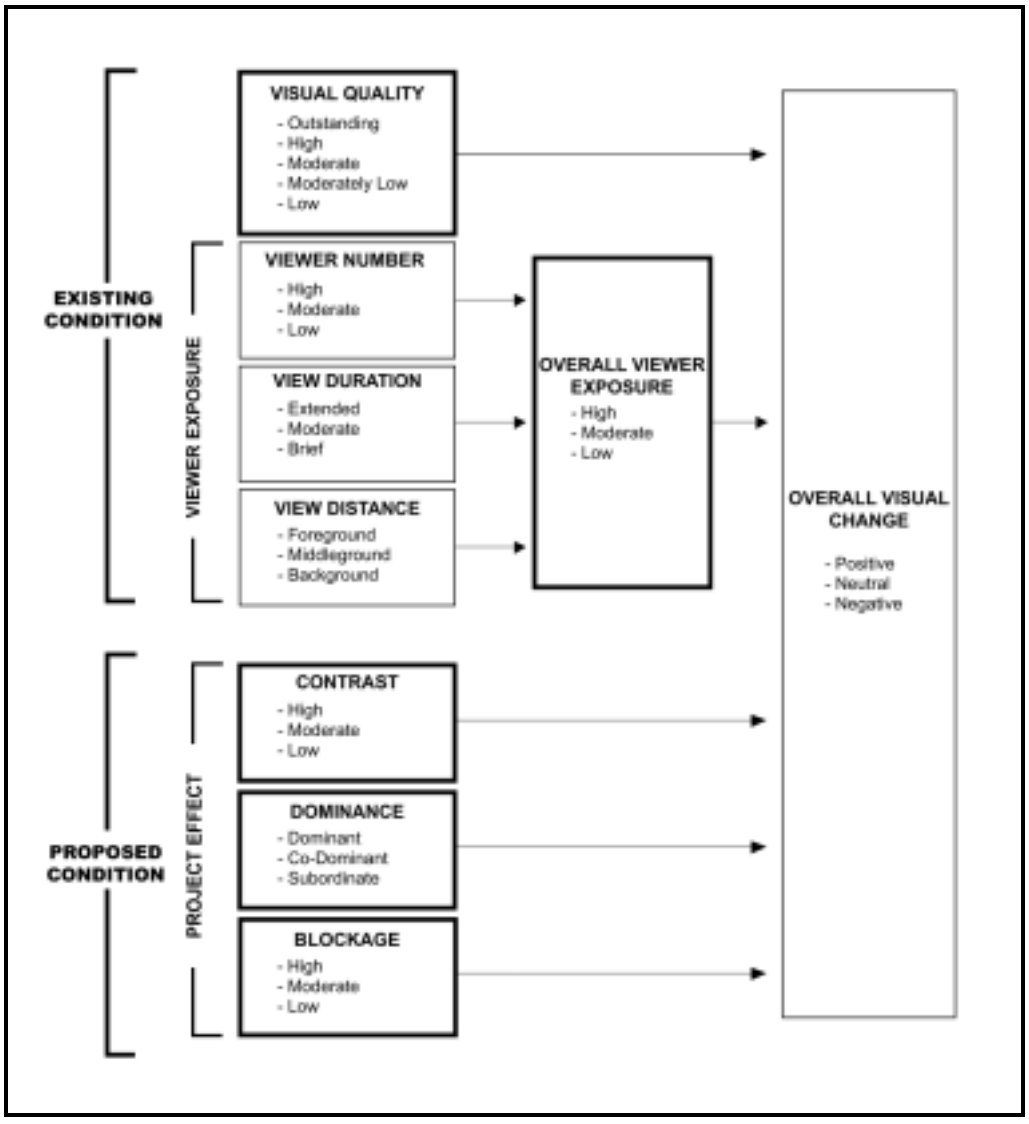


Figure 6.13-21: Assessment of Overall Visual Change at Each KOP

6.13.5.1 Visual Setting Assessment

The analysis of the area's existing visual character includes an assessment of the visual quality of the landscape as required by CEC, and the level of viewer exposure relative to the Project at each KOP. Because viewer concern was considered equal in all instances, it was not considered to be a determining factor in evaluating the visual setting, and therefore not included in the assessment.

Visual Quality

The assessment of the landscape's visual quality uses a landscape quality rating scale that incorporates five landscape quality classes listed in Table 6.13-2. This rating system is based on the scale developed for use with an artificial intelligence system for evaluation of landscape visual quality (Buhyoff et. al., 1994). This scale provides a framework for qualitative ratings because it is based on the findings of the full range of available research on the ways in which the public evaluates visual quality. It defines landscape quality in relative terms, contrasting landscapes that are average in visual quality with those that are above and below average, and those that are at the top ("picture post card") and bottom (dominated by visually discordant human alterations) of the landscape quality spectrum.

Table 6.13-2: Visual Quality Rating Scale

Visual Quality Rating	Explanation
Outstanding	A rating reserved for landscapes with exceptionally high scenic value. These landscapes will be significant regionally and/or nationally. They usually contain exceptional natural or cultural features that contribute to this rating. They will be what we think of as "picture post card" landscapes. People will be attracted to these landscapes to be able to view them.
High	Landscapes that have high quality scenic value. This may be due to cultural or natural features contained in the landscape or to the arrangement of spaces contained in the landscape that causes the landscape to be visually interesting or a particularly comfortable place for people. These are often landscapes that have a high potential for recreational activities or in which the visual experience is important.
Moderate	Landscapes that have average scenic value. They usually lack significant man-made or natural features. Their scenic value is primarily a result of the arrangement of spaces contained in the landscape and the two-dimensional visual attributes of the landscape.
Moderately Low	Landscapes that have below average scenic value but not low scenic value. They may contain visually discordant man-made alterations, but these features do not dominate the landscape. They often lack spaces that people will perceive of as inviting and provide little interest in terms of two-dimensional visual attributes of the landscape.
Low	Landscapes with low scenic value. The landscape is often dominated by visually discordant man-made alterations or they are landscapes that do not include places that people will find inviting and lack interest in terms of two-dimensional visual attributes.

Note: Rating scale based on Buhyoff et al., 1994

Viewer Exposure

Viewer exposure considers the number of viewers, the duration of the view, and the viewing distance to the landscape feature. Increasing distance between the viewer and the landscape feature reduces visibility. Overall viewer exposure ranges from high values for all factors, such as an unobstructed foreground view from a large number of residences, to low values for all factors, such as a partially obscured and brief background view for a few motorists.

6.13.5.2 Assessment of Proposed Conditions

This assessment considers the compatibility of the Project's visual characteristics with existing visual elements, the relative size of the power plant, and the potential blockage of landscape features from each KOP. A rating is applied to each category.

Visual Contrast

Visual contrast describes the degree to which the Project's visual elements (consisting of form, line, color, and texture) differ from the same visual elements established in the existing landscape. The presence of forms, lines, colors, and textures in the existing landscape similar to those of the Project indicates a landscape more capable of accepting the Project elements than a landscape where those elements are absent. The degree of visual contrast is rated as low, moderate or high.

Project Dominance

Dominance is a measure of the Project's apparent size relative to other visible landscape features and the total field of view. The facility's dominance is affected by its relative location in the field of view (foreground, middleground, and background) and the distance between the viewer and the Project. The level of dominance is rated as subordinate, co-dominant, or dominant.

View Blockage

View blockage describes the extent to which any previously visible landscape features are blocked from view by the Project. Blockage of higher quality landscape features by lower quality features causes adverse effects. The degree of view blockage is rated as low, moderate, or high.

6.13.5.3 Determination of Overall Visual Change

The assessment of overall visual change is based on the conclusions regarding existing visual quality, overall viewer exposure, visual contrast, Project dominance, and view blockage. The visual criteria are based on the existing local conditions. The visual setting is the baseline from which to consider the level of visual change, and is defined by its natural and man-made features.

The analysis considers the level of visual change within the existing visual context. Overall visual change is characterized as positive, neutral, or negative.

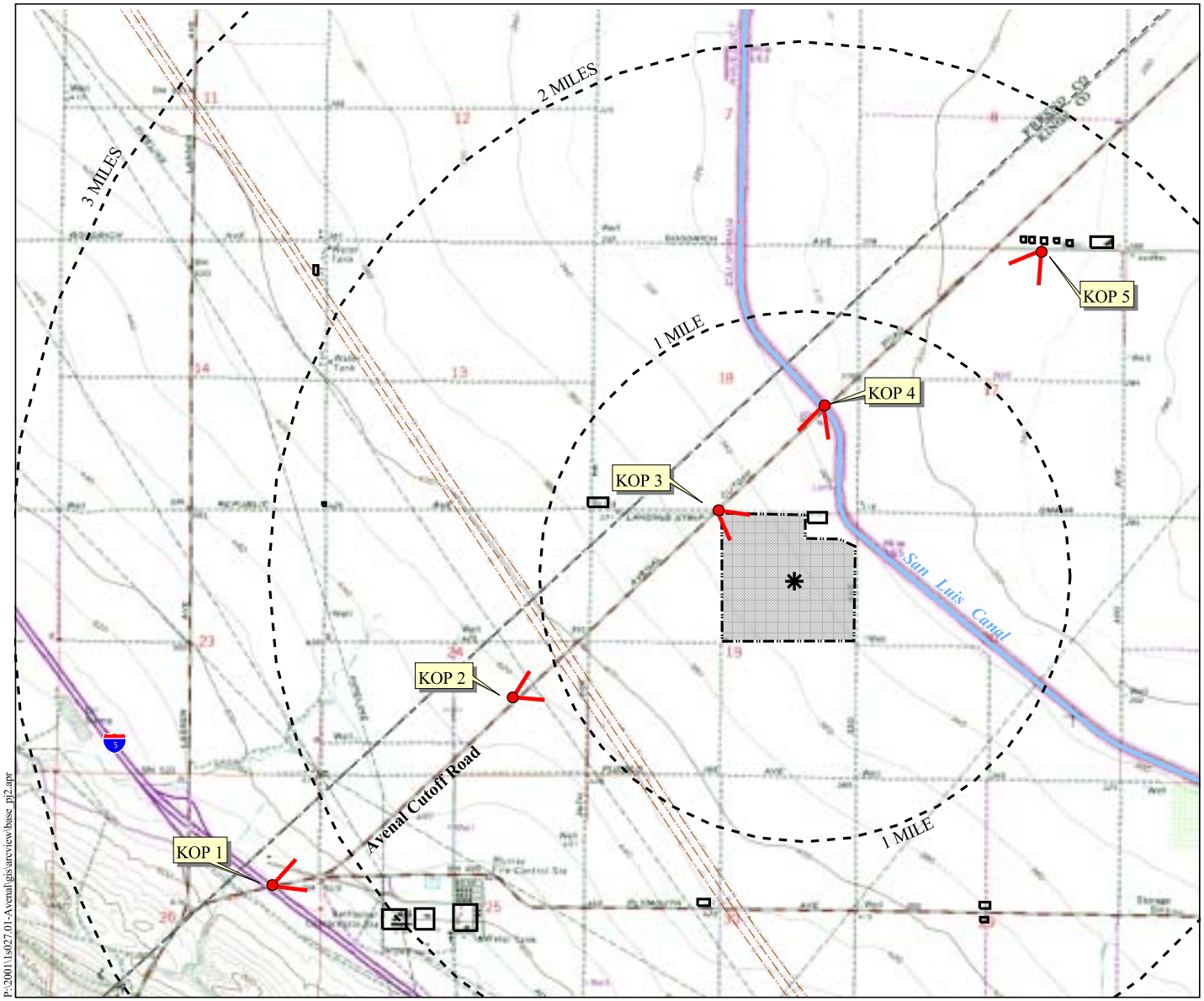
6.13.5.4 Significance of Visual Change

The determination of significance of the visual change resulting from the Project is based on its overall effect upon all representative viewpoints (KOPs) evaluated. An adverse impact from an individual KOP would not connote a finding of overall significant impact for the Project. The significance criteria are based on the California Environmental Quality Act (CEQA) Guidelines, Appendix G, Environmental Checklist Form. Because the Project would not be located within a designated scenic corridor, no impact to scenic resources would occur through Project implementation, and this impact criterion provided in Appendix G was therefore not discussed in the analysis. Conflicts with local goals, policies or designations regarding visual resources would constitute significant effects.

6.13.6 KEY OBSERVATION POINTS AND PROJECT MODIFICATIONS

Five representative public view locations in the Project vicinity were identified with the concurrence of the CEC and City of Avenal staff. Considerations in selecting the KOPs were the distance from the Project, duration of view, number of viewers, landscape content, and viewer type (residential and mobile). Because most views of the Project would be from Avenal Cutoff Road, three KOPs are located along this roadway representing distant, intermediate and close-up views of the Project. The two remaining KOPs illustrate the Project from Interstate 5 and from residences along Orange Avenue. Figures 6.13-22 and 6.13-23 show the location and view orientation of the five KOPs.

The characteristics of the Project were documented using Computer Aided Design line drawings. The drawings were then used to create photographic simulations of the Project as viewed from representative viewpoints to produce realistic images of proposed conditions. The simulations of the Project were incorporated into digital photographic files, upon which the image of the Project could be placed. A three-dimensional computerized model of the Project was created at the same scale and angle as viewed from the KOP photograph, and placed into the KOP photograph. These simulations accurately portray the location, size, and form of the Project from each KOP.



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Avenal Energy

DUKE ENERGY AVENAL, LLC

KOP Locations in Context

KOP Locations and Orientation

Man-Made Features

- County Boundary
- Interstate Highway
- Transmission Line
- San Luis Canal
- Nearby Existing Structures
- Project Location
- Project Site Boundary

N

Scale 1 : 24,000
1" = 2000 feet

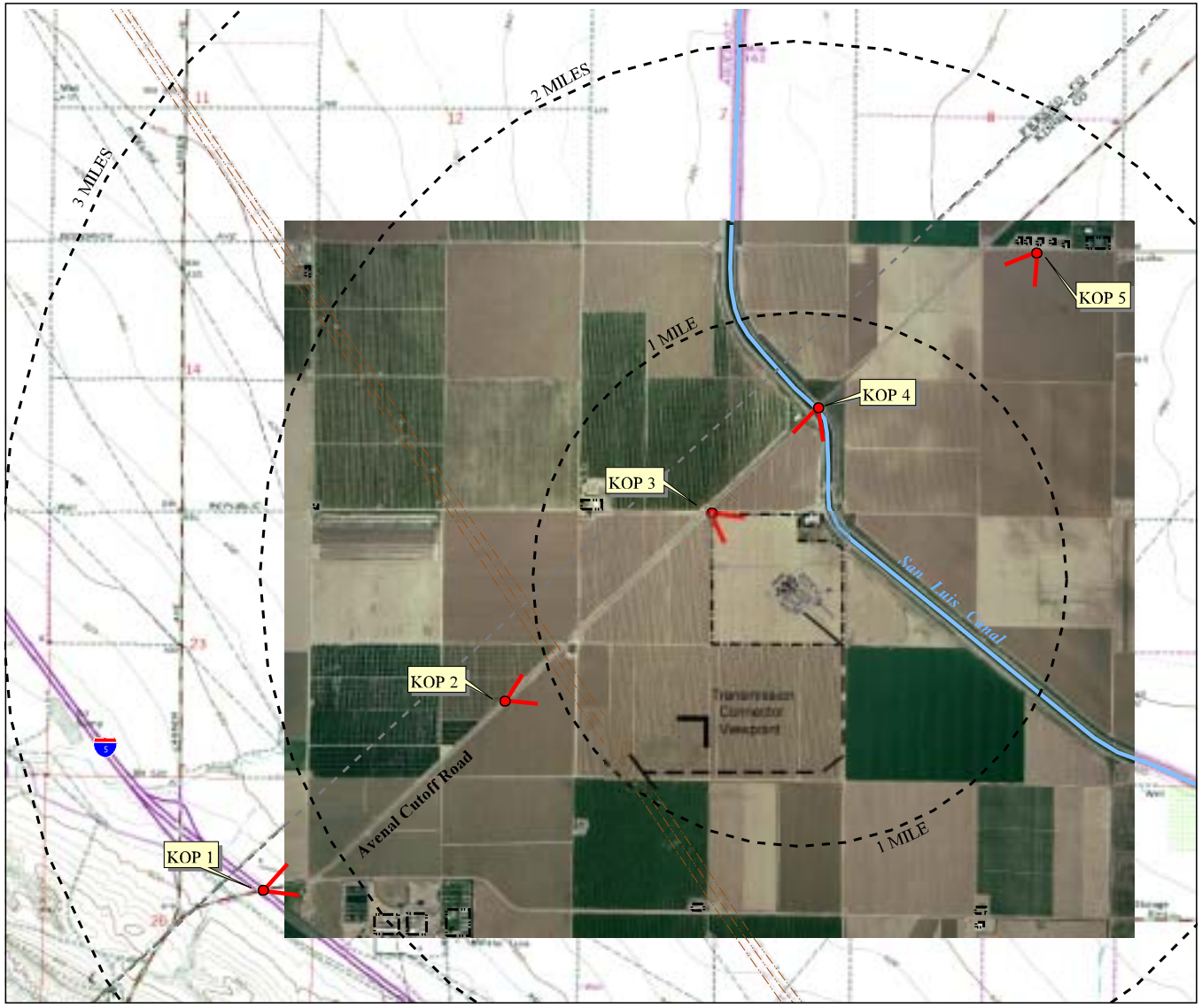
1000 0 1000 2000 3000 4000 5000 Feet

500 0 500 1000 Meters

GIS Mapping by **EDAW, Inc.** - San Francisco

EDAW

Figure 6.13-22



Avenal Energy

DUKE ENERGY AVENAL, LLC

KOP Locations on Air Photo

KOP Locations and Orientation

Man-Made Features

- County Boundary
- Interstate Highway
- Transmission Lines
- San Luis Canal
- Nearby Existing Structures
- Project Location
- Project Site Boundary
- Project Connector Lines

N

Scale 1 : 24,000
1" = 2000 feet

1000 0 1000 2000 3000 4000 5000 Feet

500 0 500 1000 Meters

GIS Mapping by **EDAW, Inc.** - San Francisco

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Figure 6.13 -23

6.13.7 VISUAL ASSESSMENT OF KEY OBSERVATION POINTS

The visual assessment evaluates the existing visual environment and the Project effects upon the visual environment at each KOP. It considers the rating of existing visual conditions in combination with the Project effects when assessing the overall visual change that would occur from the Project.

6.13.7.1 KOP 1 – View From Bridge Above Interstate 5

KOP 1 was selected to represent the nearest view of the Project from Interstate 5. The viewpoint is located at the Avenal Cutoff Road interchange across Interstate 5, approximately 2 miles from the Site. This viewpoint is approximately 25 feet higher than the motorists' view from the road, and therefore presents a broader view than would actually be experienced from Interstate 5. Figure 6.13-24 shows the existing view and the view with the Project from KOP 1.

Existing Conditions

Visual Quality

At this viewpoint the landscape is characterized by flat agricultural land with a few farmhouses and outbuildings along Plymouth Avenue in the middleground view. The woodpile power lines in the foreground provide a vertical edge to Avenal Cutoff Road continuing in a northwest direction into the middleground view. A cluster of vegetation and low rise structures are in the middleground at the southern edge of the viewpoint, and the Kettleman Compressor Station is at the far right of the view, clustered among a farm residence and farm support structures. The landscape quality is related to the broad expanse of agriculturally cultivated land visible in conjunction with the industrial infrastructure from this viewpoint. Applying the Buhyoff landscape visual quality scale, the view from this KOP can be classified as having **moderately low** visual quality. The view's foreground and middleground provide relatively little visual interest and contain visually prominent infrastructure facilities.

Viewer Exposure

Primary viewer exposure would be from motorists along Interstate 5. Approximately 27,750 vehicles per day travel along Interstate 5, representing a high number of viewers. Most vehicles would be traveling at approximately 70 mph, providing brief views of the landscape beyond the highway. Landscaping and berms that parallel Interstate 5 further interfere with views from the freeway. Views from the interstate at this location are dominated by man-made features with the distant hills in the background being the primary landscape feature. Although a high number of motorists view the landscape from this KOP, views would be brief and dominated by man-made features. Additionally, the primary landscape feature is located in the distant background. Overall visual exposure is therefore classified as **low**.

Proposed Conditions

Visual Contrast

From this KOP the Site would be seen at a distance from an elevation nearly 20 feet above the freeway from vehicles traveling along Interstate 5. The distance of the Project from this viewpoint results in a blending of the Project features into the overall landscape, reducing the Project contrast with the overall visual landscape. Project features would not intrude into the horizon and would not be seen as substantially different than the existing man-made structures. The level of visual contrast would be **low**.

Project Dominance

The dominant feature of the landscape from KOP 1 is Avenal Cutoff Road and the tilled agricultural land in the foreground. The location of the Project in the background view renders the relative size of the Project small, particularly when compared to the other elements of the landscape, and in relation to the foreground landscape elements. As a result, the Project would appear as a **subordinate** feature of the landscape when compared to the prominent foreground features.

View Blockage

At KOP 1, the additional industrial features introduced into the landscape by the Project would not block views towards the horizon. The Project would appear as a distant feature of an already substantially modified landscape. Project view blockage would be **low**.

Overall Visual Change

Table 6.13-3 considers the evaluation of the existing visual environment and the proposed condition, and rates the level of overall visual change. Because of the generally low visual quality and viewer exposure, combined with the low contrast, blockage and subordinate relationship of the Project in the landscape, the overall visual change is characterized as **neutral**.

Table 6.13-3: KOP 1 - Overall Visual Change

KOP	EXISTING CONDITION		PROPOSED CONDITION			OVERALL VISUAL CHANGE
	Visual Quality	Overall Viewer Exposure	Contrast	Dominance	Blockage	
1	Moderately Low	Low	Low	Subordinate	Low	Neutral

KOP 1 Existing Conditions from Bridge above Interstate 5

KOP 1 Proposed Conditions from Bridge above Interstate 5

Summary of Visual Change

- Project features blend into overall landscape.
- Project is 2 miles distant and therefore relatively small.
- Project does not extend into horizon line.

Note: Life size viewing distance is 8" from eye.

KOP 1 - Overall Visual Change
NEUTRAL

EDAW

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6.13.7.2 KOP 2 – View East From Avenal Cutoff Road

KOP 2 was selected to represent views towards the Site as experienced by eastbound travelers along Avenal Cutoff Road. The viewpoint is slightly over 1 mile southwest of the Site. Figure 6.13-25 shows the existing view and the view with the Project from KOP 2. Avenal Cutoff Road is not a designated scenic route.

Existing Conditions

Visual Quality

The primary element in the existing foreground view is the open flat agricultural land and roadway. The large PG&E transmission towers dominate the middleground view. The roadway and flat open agricultural land in the foreground create a strong horizontal plane, while the transmission towers in the middleground and wood pile power lines in the foreground and middleground create strong vertical elements. The preponderance of man-made features in the landscape in combination with the open agricultural land creates a scene that is a mix of the rural and technological. Applying the Buhyoff landscape visual quality scale, the view from this KOP can be classified as having **low** visual quality. The view's foreground and middleground provide relatively little visual interest, do not contain inviting features, and contain visually prominent infrastructure facilities.

Viewer Exposure

Primary viewer exposure would be from motorists traveling along Avenal Cutoff Road. Approximately 2,455 vehicles per day travel along this road representing a relatively low number of viewers, when compared to the volumes along Interstate 5. Most vehicles travel at fast speeds along the roadway (approximately 55 mph) viewing the landscape from this KOP for a moderate duration of time (from 10 to 30 seconds). The view is dominated by man-made features, including the open agricultural areas, which are either under agricultural production or developed as roads and easements for industrial infrastructure. Because of the low number of viewers, moderate duration of the view, and absence of a landscape feature in the view, overall viewer exposure is classified as **low**.

Proposed Conditions

Visual Contrast

From this viewpoint the existing transmission power lines, roadway, and lands under agricultural production establish a predominantly man-made landscape. The Project is placed in the middleground view, between existing PG&E transmission towers. From this view the Project's massing contrasts with the lattice-like construction of the transmission towers, but appears much shorter and smaller than the existing structures. The tops of the HRSG stacks would intrude into the skyline, with the majority of the Project appearing below the horizon line. Because of the intrusion of the stacks into the skyline and the architecture difference between the Project and existing structures, visual contrast would be characterized as **moderate**.

Project Dominance

The dominant features of the landscape from KOP 2 are Avenal Cutoff Road, the agricultural land in the foreground view, and the transmission towers in the middleground and background views. The Project, located in the middleground view, is lower and smaller in scale than the transmission towers. The relatively low height of the Project, as compared to the towers, would result in a minimal change to the horizontal plane from KOP 2. This viewpoint remains dominated by the tilled character of the agricultural land, the asphalt corridor of Avenal Cutoff Road, and the transmission towers. As a result, the Project would appear as a **subordinate** feature to the dominant landscape features.

View Blockage

From KOP 2, the Project stacks, transmission towers, and telephone poles would intrude into the skyline. The level of intrusion from the Project's HRSG stacks, however, would be substantially less than the existing transmission towers and telephone poles. The potential view blockage resulting from the Project at this viewpoint would be **low,** because of the already substantial blockage provided by the existing industrial features.

Overall Visual Change

Table 6.13-4 summarizes the evaluation of the existing visual environment and the proposed condition, and rates the level of overall visual change. Because of the low visual quality and low viewer exposure, in combination with the low blockage and subordinate relationship of the Project to the overall landscape, overall visual change is characterized as **neutral**.

Table 6.13-4: KOP 2 - Overall Visual Change

KOP	EXISTING CONDITION		PROPOSED CONDITION			OVERALL VISUAL CHANGE
	Visual Quality	Overall Viewer Exposure	Contrast	Dominance	Blockage	
2	Low	Low	Moderate	Subordinate	Low	Neutral

KOP 2 Existing Conditions Northeast from Avenal Cutoff Road

KOP 2 Proposed Conditions Northeast from Avenal Cutoff Road

Summary of Visual Change

- Project is subordinate to the nine transmission towers visible in this view.
- Distant views are relatively unaffected by Project.
- Stacks appear to penetrate horizon, though backdropped by distant hills.

Note: Life size viewing distance is 8" from eye.

KOP 2 - Overall Visual Change
NEUTRAL

EDAW

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6.13.7.3 KOP 3 – View from Entrance Road

This KOP was selected to provide the closest public view of the Site. The viewpoint is located at the entrance to the Site from Avenal Cutoff Road. Landscaping installed by the Applicant on undeveloped areas of the Site will frame this view upon Project completion. Landscaping at this location will also be installed during construction to provide screening during the interim period. Figure 6.13-26 shows the existing view and the view with the Project without landscaping, while Figure 6.13-27 shows the view of the Project with landscaping at KOP 3.

Existing Conditions

Visual Quality

The major element of the existing view at this viewpoint is the expanse of flat, open agricultural land and unimproved roadway that extend into the horizon. The agricultural land dominates the foreground and middleground views. The water treatment plant is visible at the end of the entrance road along the edge of the horizon. This landscape is dominated by the horizontal elements of ground and sky. Vertical elements are limited to the recent orchard plantings, some tall grass and the water treatment plant structures in the distant view. Applying the Buhyoff landscape visual quality scale, the view from this area can be classified as having a **moderately low** visual quality because the view represents a landscape that has undergone substantial alteration and does not contain visually engaging features.

Viewer Exposure

At this location the primary viewer exposure is from motorists traveling along Avenal Cutoff Road. Approximately 2,455 vehicles per day travel along this road representing a relatively low number of viewers, when compared to the volumes along Interstate 5. Man-made features dominate the foreground and middleground views at this location. Most vehicles travel at high speeds along the roadway (approximately 55 mph), and view the landscape for a brief duration of time (approximately 10 seconds), because of the closeness of the view. Because of the moderate to low number of viewers, brief duration of the view, and predominantly man-made character of this view, overall viewer exposure can be classified as **low.**

Proposed Conditions

Visual Contrast

From this viewpoint the Project would add another industrial feature to the landscape at a location that is closer to the viewer than the existing water treatment plant. Landscaping will be planted on the undeveloped portions of the Site. The existing water treatment plant, like the Project, is industrial in appearance, but appears at a substantially reduced scale from this viewpoint. The industrial features added by the Project would therefore be more noticeable because of the overall mass of the Project is viewed at close distance. The Project would intrude into the skyline at this viewpoint. The level of visual contrast would be **high**.

Project Dominance

The dominant features of the landscape from KOP 3 are the agricultural land and roadway in the foreground and middleground view. The Project, in the middleground, would introduce large industrial elements into the horizon unobscured by any existing man-made or natural features. The Project would therefore appear **dominant** from this viewpoint.

View Blockage

The view at KOP 3 does not include a natural landscape feature. All of the elements in the view have undergone substantial alteration for either agricultural or infrastructure purposes. The HRSG stacks intrude into the horizon, but do not interfere with a view of any distant landscape features. To the left and in the foreground would be new orchards, which will somewhat obscure this view when the trees reach maturity. View blockage from the Project at this viewpoint would be **low**.

Overall Visual Change

Table 6.13-5 summarizes the evaluation of the existing visual environment and the proposed condition, and rates the level of overall visual change. Although the viewpoint does not provide a high visual quality or viewer exposure, without landscaping the Project would present a high contrast and dominant relationship in this view (Figure 6.13-26). The proposed landscaping would reduce views into the Project and extend agricultural patterns into the Site. The resulting overall visual change with landscaping is therefore characterized as **positive** (Figure 6.13-27).

Table 6.13-5: KOP 3 - Overall Visual Change

KOP	EXISTING CONDITION		PROPOSED CONDITION			OVERALL VISUAL CHANGE
	Visual Quality	Overall Viewer Exposure	Contrast	Dominance	Blockage	
3	Moderately Low	Low	High	Dominant	Low	Positive with landscaping

KOP 3 Existing Conditions from Entrance Road

KOP 3 Conditions from Entrance Road without Landscaping

Visual Change

- Project is relatively close to viewer and dominates view.
- Project extends above skyline, though no landscape features are evident in distance.
- Existing industrial character of water treatment plant is evident.

Note: Life size viewing distance is 8" from eye.

KOP 3 - Existing and Project

EDAW

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KOP 3 View from Entrance Road without Landscaping

KOP 3 View from Entrance Road with Landscaping

Summary of Visual Change

- View corridor reveals entire height of stacks, framed by blooming orchard.
- Roads to water treatment plant and Project are paved.
- Entry road to Project bordered by tall evergreen trees visible to right.
- Trees in middle ground soften industrial character of ancillary equipment.

Note: Life size viewing distance is 8" from eye.

KOP 3 - Overall Visual Change
POSITIVE

EDAW

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6.13.7.4 KOP 4 – View from the San Luis Canal

This KOP was selected to represent a view towards the Project from motorists traveling southwest along Avenal Cutoff Road. The viewpoint is located at the intersection of the San Luis Canal and Avenal Cutoff Road, less than one-half mile from the Site. It provides a typical view from Avenal Cutoff Road looking west across the canal toward the Kettleman Hills. Figure 6.13-28 shows the existing view and the view with the Project from KOP 4, while Figure 6.13-29 illustrates the proposed condition with landscaping.

Existing Conditions

Visual Quality

This view provides a panoramic vista of the valley floor with the canal in the foreground and the Kettleman Hills in the background. The foreground view is almost entirely taken up by the canal, except for the bridge at the edge of the view. Lands under agricultural production and the water treatment plant are located in the middleground. The power lines form a small cluster of vertical elements in the middleground view. The Kettleman Hills, located along the western edge of the view, are a natural feature of this landscape. Applying the Buhyoff landscape visual quality scale, the view from this area can be classified as having a **moderate** visual quality. The presence of a dominant water feature, the arrangement of spaces in the view, and the location of the Kettleman Hills in the background, provides some viewer interest.

Viewer Exposure

The primary viewer exposure is from motorists traveling along Avenal Cutoff Road. Approximately 2,455 vehicles per day travel along this road representing a relatively low number of viewers, when compared to the volumes along Interstate 5. The landscape is comprised of a combination of man-made and natural features. Most vehicles travel at high speeds along the roadway (approximately 55 mph) and view the landscape from this KOP for a brief duration of time (between 10 and 30 seconds). Because of the low number of viewers, brief duration of the view, and location of the landscape feature in the background, overall viewer exposure can be classified as **low.**

Proposed Conditions

Visual Contrast

From this viewpoint the existing industrial man-made features of the landscape e.g., the San Luis Canal and water treatment plant, establish a visual context for the Project. The Project's features appear larger than the water treatment plant, but the proximity of the Project to the plant provides an uninterrupted industrial façade at this viewpoint. The Project's industrial features are noticeable because of their location in the middleground, and elevated position of the viewer. The existing view towards the Kettleman Hills in the background would be somewhat interrupted by the Project's HRSG stacks, resulting in a **moderate** visual contrast.

Project Dominance

The dominant features of the landscape from KOP 4 are the flat reflective water surface of the canal and the expansive agricultural land in the foreground view. These features form a strong horizontal context, with the Project in the middleground expanding upon the existing vertical industrial elements in the landscape. When considered in the context of the dominant water surface in the foreground and middleground, framed by the expansive agricultural land, the Project would appear **co-dominant** with these features.

View Blockage

From KOP 4 the Project stacks would rise above the horizon, somewhat reducing the view of the Kettleman Hills. The presence of the stacks in the skyline would interfere with the extensive views of agricultural lands and the Kettleman Hills. View blockage from the Project would therefore be **moderate**.

Overall Visual Change

Table 6.13-6 summarizes the evaluation of the existing visual environment and the proposed condition, and rates the level of overall visual change. Because of the generally moderate level of visual quality, in combination with the moderate level of Project effects upon the landscape, including the proposed landscaping, the overall visual change is characterized as **neutral**.

Table 6.13-6: KOP 4 - Overall Visual Change

KOP	EXISTING CONDITION		PROPOSED CONDITION			OVERALL VISUAL CHANGE
	Visual Quality	Overall Viewer Exposure	Contrast	Dominance	Blockage	
4	Moderate	Low	Moderate	Co-Dominant	Moderate	Neutral

KOP 4 Existing Conditions from San Luis Canal

KOP 4 Conditions from San Luis Canal without Landscaping

Visual Change

- Project extends the industrial character of the water treatment plant.
- Project backdropped by the Kettelman Hills and does not extend above horizon.
- Project is codominant in the landscape with the canal and Avenal Cutoff Road.

Note: Life size viewing distance is 8" from eye.

KOP 4 - Existing and Project

EDAW

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KOP 4 View from San Luis Canal without Landscaping

KOP 4 View from San Luis Canal with Landscaping

Summary of Visual Change

- View corridor reveals majority of Project in a landscaped setting.
- Water treatment plant is screened from view.
- Tall evergreen windrows across ground plane establish broad setting.
- Orchards in bloom are in foreground.

Note: Life size viewing distance is 8" from eye.

KOP 4 - Overall Visual Change
NEUTRAL

EDAW

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6.13.7.5 KOP 5 – View from Orange Avenue

This KOP was selected to represent the view from residences within viewing distance from the Project. The viewpoint is located approximately 1.3 miles from the Site. A few residences are located along Orange Avenue with views towards the Project. Figure 6.13-30 shows the existing view and the view with the Project from KOP 5.

Existing Conditions

Visual Quality

This view provides a panoramic vista of the valley floor from the agricultural lands in the foreground to the Kettleman Hills in the background. The landscape is comprised of a combination of man-made and natural features. The foreground and middleground view is entirely taken up by lands under agricultural production. The water treatment plant and power lines form a small cluster of vertical elements within the middleground view. The primary vertical elements and natural features of this landscape are the Kettleman Hills, which form the western edge of the landscape. Applying the Buhyoff landscape visual quality scale, the view from this area can be classified as having a **moderate** visual quality primarily because the arrangement of spaces provides a panoramic vista encompassing the agricultural land and Kettleman Hills.

Viewer Exposure

From this viewpoint primary viewer exposure is from residents occupying a few homes along Orange Avenue. Workers at the agricultural processing area south of the residences also will intermittently view the area. Traffic count data was not available for Orange Avenue, but because it is not a through street and services only a few residences and a small processing area, traffic levels are low. At this viewpoint the middleground views are dominated by agricultural lands, with the Kettleman Hills in the background. The distance of the agricultural lands from the viewpoint somewhat obscures the geometric planting patterns and structures present in the orchards. Although views from this KOP would be extended, because of the low number of viewers and presence of natural features in the background landscape, overall viewer exposure can be classified as **moderate.**

Proposed Conditions

Visual Contrast

From this viewpoint the existing man-made features of the landscape e.g., Avenal Cutoff Road and the telephone poles along the road, are not as prominent as the agricultural land and distant Kettleman Hills. The existing view towards the Kettleman Hills in the background will be minimally interrupted in the far middleground by the Project's built forms. The Project's features will be barely visible in the view. The Project's industrial features would be hardly noticeable because of their location in the middleground adjacent to the existing water treatment plant, creating a **low** visual contrast.

Project Dominance

The dominant features of the landscape from KOP 5 are the expansive agricultural lands in the foreground and middleground views, and the Kettleman Hills in the background. Avenal Cutoff Road forms the northern edge of the view. These features form a strong horizontal context, with the Project in the middleground at a distance that greatly reduces the overall Project size in relationship to the other features of the landscape. The Project would appear small as compared to the other elements of the landscape. As a result, the Project would appear as a **subordinate** feature of the landscape when compared to the prominent foreground and middleground features.

View Blockage

From KOP 5, the Project stacks would not rise above the horizon, resulting in no reduction in the view of the horizon. New orchards located in the foreground and middleground views will intrude into the horizon when mature, somewhat obscuring this view within two years. View blockage from the Project would therefore be **low**.

Overall Visual Change

Table 6.13-7 summarizes the evaluation of the existing visual environment and the proposed condition, and rates the level of overall visual change. Because of the moderate visual quality and moderate viewer exposure, in combination with the low contrast, blockage and subordinate relationship of the Project, the overall visual change is characterized as **neutral**.

Table 6.13-7: KOP 5 - Overall Visual Change

KOP	EXISTING CONDITION		PROPOSED CONDITION			OVERALL VISUAL CHANGE
	Visual Quality	Overall Viewer Exposure	Contrast	Dominance	Blockage	
5	Moderate	Moderate	Low	Subordinate	Low	Neutral

.

KOP 5 Existing Conditions from Orange Avenue

KOP 5 Proposed Conditions from Orange Avenue

Summary of Visual Change

- Landscape is dominated by expansive agriculture and distant hills.
- Project is one and a half miles away and barely evident.

Note: Life size viewing distance is 8" from eye.

KOP 5 - Overall Visual Change
NEUTRAL

EDAW

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6.13.8 SUMMARY OF VISUAL RESOURCE EVALUATION

The following table summarizes the results of the visual resource evaluation at each of the five KOPs. The analysis concluded that the overall visual change would be neutral at four of the five viewpoints. The visual change at KOP 3 was characterized as positive because of the planting of orchards and other landscaping on the undeveloped part of the Site as described in Section 6.13.3.4. The conceptual landscaping plan incorporated into the Project will improve views into the Site from KOP 3, the closest viewpoint, by reducing the view areas and framing views into the Site with features from the surrounding agricultural landscape.

Interim views at KOP 3 during construction will be enhanced by planting areas outside the construction laydown area with orchards, row crops and vegetative screens. The Site entrance area could be planted with vegetative screens of tall evergreen trees, the perimeter screen planting could be installed, and row crops could be planted along the western edge of the Site. Grasses could be planted in small intermediate areas during construction. The integration of farming with the planting of vegetative screening and grasses will provide ongoing weed and dust control. The landscaping will be actively maintained in accordance with general farming practices.

Table 6.13-8: Summary of KOP Visual Assessments

KOP	EXISTING CONDITION		PROPOSED CONDITION			OVERALL VISUAL CHANGE
	Visual Quality	Overall Viewer Exposure	Contrast	Dominance	Blockage	
1	ML	L	L	SUB	L	Neutral
2	L	L	M	SUB	L	Neutral
3	ML	L	H	DOM	L	Positive* (w/landscaping)
4	M	L	M	CO-DOM	M	Neutral
5	M	M	L	SUB	L	Neutral

*The inclusion of landscaping frames the view from this KOP (see Figure 6.13-27).

H = High
M = Moderate
ML = Moderately Low
L = Low

SUB = Subordinate
DOM = Dominant
CO-DOM = Co-Dominant

6.13.9 SIGNIFICANCE OF OVERALL VISUAL CHANGE

The determination of the significance of visual changes resulting from the Project was based on the Project's overall effect upon all representative viewpoints (KOPs) evaluated, considered in the context of the existing visual environment. An adverse impact at an individual KOP would not connote a finding of overall significance for the Project.

6.13.9.1 Significance Criteria

The significance criteria used for this assessment are based on the CEQA Guidelines, Appendix G, Environmental Checklist Form. Because the Project would not be located within a State scenic right-of-way, no impact to scenic resources would occur through Project implementation. This impact criterion provided in Appendix G is therefore not discussed in the following analysis. The Project would be considered to have a significant adverse impact on visual resources if it would result in:

- A substantial adverse effect on a scenic vista.
- Substantial degradation of the existing visual character or quality of the Site and its surroundings.
- Creation of a new source of light and glare, such as introducing reflective building materials and nightlighting into the area, that would adversely affect day or nighttime views of the area.

Conflicts with local goals, policies or designations regarding visual resources would also constitute significant effects and are discussed in Section 6.13.12 of this analysis - Laws, Ordinances, Regulations and Standards.

6.13.9.2 Project Impact to Scenic Vista

The Project would not adversely impact a scenic vista. The Project area does not include any identified scenic roadways or scenic vistas. Because of the low population density in the area, public viewpoints are primarily the roadways in the Project area. Views from these roads will be of short duration and interrupted by existing and proposed vegetation along Interstate 5 and surrounding the Project facility.

At a distance of more than 3 miles, the Project would become part of the background, where little color or texture is evident. In the distant views represented by KOPs 1 and 2, the Project will appear as a smaller element in a larger landscape panorama. The closest view into the Site, illustrated by KOP 3, will provide brief glimpses of the Project framed through the conceptual landscaping proposed as part of the Project. Views of the Project from KOP 4 would expand the

industrial elements already present in the landscape. Views from KOP 5 across the valley would be dominated by the agricultural uses in the foreground and middleground, along with the Kettleman Hills in the background. The Project would blend into the middleground view. The distance of the Project from the viewpoint renders it barely visible within the agricultural landscape.

Because of the absence of identified scenic roadways or vistas in the Project vicinity, the short duration of views towards the Project from surrounding roadways, and the substantial alteration of the existing landscape through agricultural and industrial activities, the Project would have a less than significant impact to scenic vistas.

6.13.9.3 Project Impact to Existing Visual Character

The Project would not substantially degrade the existing visual character of the area. The Project area is comprised predominantly of man-made industrial and agricultural elements. In the views from each of the five KOPs, the Project introduced changes to the visual landscape would not alter the overall visual character of the area. The Project would function in accordance with the existing industrial uses of the area, including the electrical transmission towers traversing the Project area, the water treatment plant, and compression station located adjacent to Interstate 5. The Project's industrial and agricultural elements are consistent with the predominant character of the landscape.

The Project would not substantially degrade the existing visual character of the Site. When considered in the context of the moderately low visual quality and disturbed terrain at the Site, the change from construction of the Project would not be considered a degradation of its visual character. The Site is less than 1 mile from the high-voltage electrical transmission towers, adjacent to the water treatment plant, and adjacent to the San Luis Canal. Vegetation will be planted around the facility, consistent with existing landscaping patterns around agricultural structures, to more fully integrate the Project into the visual context of the area.

Because the Project would not substantially degrade the existing visual character of the area or the Site, the impact on visual character would be less than significant.

6.13.9.4 Project Creation of Light and Glare

The Project will create a new source of light and glare; however, glare will be kept to a minimum through the use of non-reflective materials. Night lighting for the Project would illuminate the facility sufficiently to ensure safe working conditions. Caps would be provided on luminaires to minimize upward glare. The proposed landscaping surrounding the Project also would provide off-site screening of the night lighting.

6.13.10 CUMULATIVE IMPACTS

Other actions with potential for cumulative effects are identified in Section 6.1.4. The only action located close enough to the Project to have the potential for cumulative affects to visual resources is the planned relocation of the City of Avenal water turnout at the San Luis Canal. The turnout relocation area is shown in Figure 6.1.2. The turnout relocation is a small construction project. Once completed, the facility will be relatively low to the ground and will have visual characteristics that are similar to existing facilities in the area for agricultural water and potable water. The cumulative impact to visual resources will be minor and less than significant.

6.13.11 MITIGATION MEASURES

The Project incorporates design features, including a conceptual landscape plan, to reduce the degree of visual change resulting from the Project. No further mitigation is necessary.

6.13.12 LAWS, ORDINANCES, REGULATIONS AND STANDARDS

The primary policies and standards relating to visual resources in the Project area are contained in the City of Avenal General Plan and Zoning Ordinance (City of Avenal, 1992). These policies are summarized below with discussion regarding the consistency of the Project with these policies.

6.13.12.1 City of Avenal General Plan

Industrial Performance Standards

Glare and heat: Any operation producing intense glare or heat should be conducted within an enclosed building or with other effective screening in such a manner as to make such glare or heat completely imperceptible from any point along the property line.

Light: Exterior lighting, except for overhead street lighting and warning, emergency or traffic signals, should be installed in such a manner that the light source is sufficiently obscured to prevent glare on public streets and walkways or into any adjoining properties.

Smoke: Smoke emitted into the atmosphere from any air contamination source or emission whatsoever should be of such a shade or density as not to obscure an observer's vision to a degree in excess of 20 percent.

Project Consistency. Project glare will be minimized through the selection of building materials and the provision of the perimeter landscape screens to reduce offsite views into the Site and facility. Night lighting for the facility would illuminate the power plant area sufficiently to ensure safe working conditions. Caps would be provided on luminaires to minimize upward

glare. The proposed landscaping surrounding the Project also would provide off-site screening of the night lighting. Some areas will be controlled by switches so that illumination occurs only when work is being conducted in the area. The Project will be constructed in conformance with the City's Industrial Performance Standards.

Circulation Element

Parking lots for new uses shall contain landscaping, proper lighting and shall be properly designed to insure maneuverability of vehicles.

Project Consistency. The Applicant will install landscaping and lighting in the parking areas in accordance with the General Plan.

Open Space Resources

Provide buffers and transition areas between urban uses and agricultural land to reduce incompatibility issues that are associated with cultivation, pest control and harvesting of crops.

Project Consistency. The Applicant will develop a landscape plan to visually buffer adjoining agricultural uses from the Project.

6.13.12.2 City of Avenal Zoning Ordinance

Parking Lot Landscaping

1. All parking lots shall have one fifteen gallon shade tree planted every two parking spaces along parking rows. This requirement may be waved for parking rows located adjacent to structures where space limitations would not permit growth of the tree. Each planter shall be surrounded by six-inch high curbing. Fifty percent of the paved parking lot surface shall be shaded by tree canopies within fifteen years of planting.

2. If the sum area of the landscaping requirements does not equal at least five percent of the total ground area of the parking lot, additional landscaping area shall be designed to achieve a landscaping coverage of five percent of the total parking lot. All landscaped planters shall be provided with an automatic irrigation system.

Project Consistency. The Applicant will develop a landscape plan for the parking areas through coordination with the City of Avenal to ensure compliance with the zoning requirements.

6.13.13 REFERENCES

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United States Department of Agriculture Forest Service. National Forest Landscape Management Volume 1. Washington D.C.: Superintendent of Documents, 1973.